Remarks/Arguments

This is in response to the Office Action dated May 14, 2008. Reconsideration is respectfully requested.

Claim 1 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite. The Applicant has amended "it" in claim 1 to read -- said balloon code device driver --. The Applicant respectfully submits claim 1 is allowable under 35 U.S.C. 112, second paragraph.

Claim 1 stands provisionally rejected under the judicially created doctrine of nonstatutory double patenting. The Applicant respectfully traverses the Examiner's rejection. Double patenting cannot be raised until there is a patented claim.

Claim 1 stands rejected under 35 U.S.C. 103 as being unpatentable over Jeddeloh et al., published Application No. 2004/0260957, in view of Waldspurger (Memory Resource Management in VMware ESX Server). Claim 1 stands additionally rejected under 35 U.S.C. 103 as being unpatentable over Rawson, published Application No. 2004/0111596, in view of Waldspurger. The Applicant has amended claim 1 to point out more distinctly the invention and respectfully traverses the Examiner's rejections.

The Jeddeloh et al. application discloses a memory module that includes a temperature sensor, an activity monitor, and a power management controller. When the temperature sensor and the activity monitor indicate that the memory module is in an idle state, the power management controller puts the memory module into a power reduction mode. With respect to temperature, the memory module is in the idle state when the temperature sensor senses a temperature less than a predetermined threshold. See, [0028] and [0029]. Similarly, with respect to activity, the memory is in the idle state when the activity monitor measures a memory activity level less than a predetermined threshold. See, [0032].

The Rawson publication discloses a system for conserving power in partitioned data processing systems. The system of Rawson allocates whole and/or fractional physical resources to logical partitions. A hypervisor maps the partitions to a minimized subset of physical resources. The hypervisor may then implement a power consumption reduction policy by powering down or scaling down power to one or more physical resources that have not been allocated. See, [0028]. In some embodiments of the system of Rawson, the hypervisor may use

techniques to alter the number of physical resources allocated at any given time dynamically. The hypervisor nominates physical pages that have not been accessed within a specified time period for deallocation. If the nomination fully deallocates a unit of physical memory, the hypervisor can power down that unit. See, [0034]. Thus, the hypervisor deallocates, and potentially powers down, memory when a monitored parameter system is less than a specified threshold.

Waldspurger discloses a ballooning technique for managing virtual machine memory. In the system of Waldspurger, a guest operating system has a fixed amount of memory. A balloon module runs on the guest, but the balloon module is controlled by the host. If the host server needs to take memory from the guest, the host directs the balloon module to allocate pinned physical pages within the guest virtual machine using native interfaces. The allocated pages become unavailable to the guest and available to the host. There is no disclosure in Waldspurger of using the ballooning technique to reduce system memory power consumption.

In the invention, as claimed in claim 1, the balloon code device driver requests memory when the monitored parameter is greater than a specified threshold. The monitored parameter may be system temperature or system power consumption. The hyperviser reclaims the memory requested by the balloon code device driver and reduces system memory power consumption, for example by powering down the reclaimed memory. Thus, in the invention, as claimed in claim 1, the system reduces power consumption when the monitored parameter is greater than a threshold.

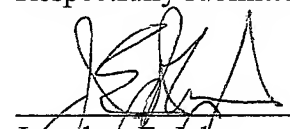
The systems of Jeddeloh et al. and Rawson both reduce power when a monitored system parameter is less than a specified threshold. The invention, as claimed in claim 1, functions opposite the systems of Jeddeloh et al. and Rawson. Thus, a combination of the systems of Jeddeloh et al. or Rawson with the technique of Waldspurger does not yield the invention of claim 1. Accordingly, the Applicant respectfully submits that the invention claim 1 is neither taught nor suggested by the references.

The Applicant has added by this amendment new claims 21-27, which depend from claim 1. The Applicant respectfully submits that new claims 21-27 are allowable. For example, new claim 24 includes a second threshold in addition to the first threshold of claim 1. In the specification, the first threshold is an emergency condition and the second condition is a warning condition. If the parameter is less than the first threshold, the method determines if the

parameter is greater than the second threshold. In claim 25, if the parameter is greater than the second threshold, the method determines if the portion of system memory allocated by said guest is sufficient to handle a current load. If so, the hypervisor invokes the balloon code device driver to request the operating system to allocate memory to the balloon code device driver. In claim 26, if the parameter is less than the second threshold, the method determines if system performance is unacceptable. If so, the hypervisor invokes the balloon code device driver to release memory allocated to the balloon code device driver. The Applicant respectfully submits that the inventions as claimed in new claims 21-27 are neither taught nor suggested by the references.

The Applicant respectfully submits that the application is in condition for allowance and requests early notice thereof. The Applicant believes no fees are due in connection with this amendment. However, please charge any fee necessary to further the prosecution of this application to **IBM CORPORATION DEPOSIT ACCOUNT NO. 09-0447**.

Respectfully submitted,



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